**श्री सभापति**:ठीक है,आपकी बात पूरी हो गई। क्या आप कुछ कहना चाहते हैं? Dr. Karan Singh.

DR. KARAN SINGH: Mr. Chairman, Sir, this is a very sensitive matter. It is true that when my father signed the Instrument of Accession, legally and constitutionally the State became part of the Indian Union. But it is also true that on 1st January, 1949 there was a ceasefire, as a result of which almost half the area of the original State was no longer under our rule. In the last 57 years, from Pandit Jawaharlal Nehru's time to the present, all sorts of suggestions have come up. You can't say that no suggestions have ever been made. It is open to anybody to make suggestions. The point is that no suggestion has yet been agreed upon and the Prime Minister had a series of talks with President Musharraf. I think we should not complicate the position of the Government of India any further and we should leave it at that.

*403. *[The questioners (SHRI RAVI SHANKAR PRASAD AND SHRI RAM JETHMALANI) were absent. For answer vide page* 33].

*404. *[The questioners (SHRI ABU ASIM AZMI AND SHRI AMAR SINGH) were absent. For answer vide page* 33].

**Cloud seeding technique for artificial rains**

405. SHRI B.J. PANDA:††

MS. PRAMILA BOHIDAR:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether it is a fact that some drought-hit States are invoking cloud seeding technique for artificial rains;

(b) if so, the details thereof;

(c) what is the action plan of the Centre to help Orissa State to develop this technique; and

(d) the details thereof ?

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) and (b) Yes, Sir. Government is

† The question was actually asked on the floor of the House by Shri B.J. Panda.

aware of efforts made by State Governments of Andhra Pradesh, Karnataka and Maharashtra to invoke cloud seeding technique for artificial rain. The respective State Governments have conducted these operations with the help of private agencies.

(c) and (d) Central Government has no plan on cloud seeding for any of the drought hit States including Orissa, because past experiments in this area have not yielded encouraging results.

SHRI B.J. PANDA: Sir, in his answer, the hon. Minister has stated that there is no proposal at the Central Government level to consider cloud seeding because past experiments have not proved to be fruitful. In this regard, I would like to draw his attention to the media reports, which came out in January this year, which talked about experiments conducted by the Andhra Pradesh Government, where an amount of Rs. 20 Crores has been spent. They specifically say that the results have been very encouraging and, with the latest technologies available, 60 per cent rainfall recorded in 510 mandals. In the light of this information, I would like to know from the hon. Minister whether he would agree to reconsider and reexamine the issue of using cloud seeding technologies in drought-prone areas.

SHRI KAPIL SIBAL: Mr. Chairman, Sir, I just want to inform the hon. Member that all the experiments done in this regard, whether in Maharashtra, Andhra Pradesh or Karnataka, have been targeted, that is targeted to particular clouds and perhaps, on that count, on account of static seeding, precipitation had taken place. But in order to validate such a procedure what we have to do is to have sufficient number of rain gauges in areas where precipitation had not taken place so that, in comparison to the results in areas where precipitation has taken place we can come to the conclusion that rainfall was on account of cloud seeding. But such experiments have not been carried out. Unless there is such validation of precipitation, it is impossible for us to say that the experiment of targeted cloud seeding is successful. That validation has not taken place because most of these cloud seeding techniques have been applied with the help of private companies operating in States.

The Central Government has never been brought on board other than being called upon to observe the event. We cannot involve any other procedure by which this can be validated.

MS. PRAMILA BOHIDAR: Sir, there is a concern expressed that cloud seeding in any State will have negative impact on the neighbouring State. Will the Minister agree to monitor such experiments to ensure that there is no negative impact on other States?

SHRI KAPIL SIBAL: Sir, I am glad that the hon. Member has raised this issue. I might point out that such experiments were conducted in the USA. When they were conducted in States like Texas, a lot of controversies arose. As you know water vapour travels in the air. When water vapour travels in the air, it may precipitate at any future stage. If any human intervention is effected at an earlier stage, people living in other States, who might have been the beneficiaries of such precipitation, may make a claim. On this account the entire experiment in the USA was given up. This has very sensitive constitutional implications. For example, if an intervention is effected in Karnataka while clouds are moving to Andhra Pradesh or the other way round, people in the other State can say, "Look, the farmers in this State are being deprived of rainfall". This whole issue has to be looked with sensitivity. Quite frankly, I have told my Ministry that we must first brainstorm and get all the States on board and look at a larger cloud covering of 100 to 200 kilometres and with the consent of the States, in national mission mode of experiment with cloud seeding provided it is scientifically provable that such an experiment is useful and would, in fact, help drought-prone areas in all these States.

SHRI JAIRAM RAMESH: Sir, in view of the fact that, at least, four different States today, *i.e.* Maharashtra, Karnataka, Tamil Nadu and Andhra Pradesh are all engaged in cloud seeding experiments with some USA company or the other and in view of the statement that he has made, I would like to know from the hon. Minister whether he would consider this a fit case for a national initiative based on the scientific and technological resources available at the command of the Central Government. Today what is happening is, the American companies are coming and selling this technology to the State Governments and the State Governments are starting individual experiments in rain-shadow areas and creating the types of problems that he is talking about. In view of this, I would like to know from the hon. Minister whether he would actually consider instituting a national mission or a national initiative for cloud seeding covering much of the peninsular India.

SHRI KAPIL SIBAL: Sir, as I have just mentioned, I have told my Department to look at it as a national mission mode after brainstorming

about its efficacy. If we find that cloud seeding is feasible and helpful to the farmers in various States, I think, we should go ahead, But this is something which will require a broader dialogue.

**श्री जसवन्त सिंह**:सभापति महोदय, मैं एक सवाल पूछना चाहता हूँ, आप ही की इजाजत से पूछ पाऊंगा, यह'क्लाउड सीडिंग' से थोड़ा हट करके है, पर है बरसात से जुड़ा हुआ। मैं एक ऐसे राज्य से आता हूँ जिससे आप परिचित हैं,जहा ...(**व्यवधान**)...

**श्री सभापति**:जहां हमेशा अकाल पड़ता है।

**श्री जसवंत सिंह**:और विशेष करके जिन जिलों में मैं बड़ा हुआ हूँ, माननीय मंत्री जी से मेरा निवेदन है कि जो वैदर फोरकास्टिंग सिस्टम है उसमें भारत जैसे देश मे मैं पाता हूँ कि आज अगर कोई गांव में काश्तकार जानना चाहे कि अगले 15 दिन में क्या होगा, तो शायद एल-निनो इत्यादि से हम सबको यहां संतोष हो जाएगा, उसको कुछ संतोष नहीं होगा यह जानकर कि 'एल-निनो पेसिफिक' में उठा है या नहीं उठा है। मेरा निवेदन है मंत्री जी से कि क्यों नही जैसे आजकल न्यूज चैंनल हैं, जैसे बी.बी.सी. या सी.एन.एन., उनके जो 'वैदर फोरकास्टिंग हैं, मुझे बड़ा खराब लगता है कि कई बार हमारे अपने वैदर फोरकास्टिंग को रोज देते हैं, क्लाउड फार्मेशन दिखलाते हैं, उनका मूवमेंट दिखलाते हैं, यह केवल एक सुविधा और व्यवस्था बनाने की है। हमने कभी इसमें सोचा था कि इसके लिए कितने अर्थ की जरुरत होगी,कुछ एस्टीमेट भी किए थे। मै तो मंत्री जी से निवेदन करुंग़ा कि ऐसा अगर कुछ हो जाता है तो भारत के काश्तकारों को बहुत बड़ा लाभ होगा, इस पर विचार करके अगर हमें कुछ कह सकें?

**श्री कपिल सिब्बल**:सभापति महोदय, इसके बारे में मैं कुछ कहना चाहता हूँ। पहली बात तो यह है कि जो लॉंग टर्म फोरकास्टिंग है वह तो हम कर सकते हैं। लॉंग टर्म मतलब अप्रैल से सितम्बर तक उसकी तो फोरकास्टिंग हम कर सकते हैं।

**श्री सभापति**:जैसे अभी की है।

**श्री कपिल सिब्बल**:हां,जैसे अभी की है कि 98 प्रतिशत होगा, वह तो हम कर सकते हैं। लेकिन सवाल यह उठता है कि किस डिस्ट्रिक्ट में,किस महीने में,कितनी बारिश होगी विज्ञान के पास आज तक कोई ऐसी सुविधा नहीं है जिसके द्वारा हम यह जानकारी अपने किसानों को दे पाएं। जहां तक इन्होंने बी.सी.सी. और यू.एस.का सवाल उठाया,मैं उनसे भी प्रार्थना करुंगा कि अगर उनके पास ऐसा डाटा हो तो वह हमें दें। मैंने तो इस पर काफी कुछ काम भी किया है और जो मुझे जानकारी मिली है,वह यह है कि बी.बी.सी. और जो अन्य meterological डिपार्टमेंट विश्व में है,वे भी नहीं बता सकते कि साउथ वेस्टर्न मानसून हिंदुस्तान में किस डिस्ट्रिक्ट में कितना होगा, क्योंकि वह इंडियन ओशन से वेस्टर्न घाट पर आता है,फिर सीधे हिमालय की ओर जाता है और फिर टर्न होकर नॉर्थ वेस्टर्न डायरेक्शन लेता है। कब क्या हो जाए,यह तो भगवान के ऊपर निर्भर करता है। तो आज के दिन विज्ञान के पास कोई ऐसा साधन नहीं है जिससे हम बता सकें। लेकिन इसके बावजूद जो उन्होंने कहा है,तो हम कोशिश कर रहे हैं कि नए-नए mathematical मॉडल्स हम बनाएं, डायनैमिक मॉडल्स बनाएं,साथ-साथ statistical मॉडल्स हम बनाएं।

स्पेस,लैंड और ओशन का सारा डाटा लें और उनको सामने रखते हुए ऐसी predictions कर पाएं। हम यह कोशिश कर रहे हैं और मैं समझता हूँ कि अगले पाँच-सात सालों में हम कुछ ऐसे मॉडल्स बनाएंगे जिससे हम किसान को यह बता सकेंगे कि हफ्ते-दो हफ्ते में कितनी बारिश होगी।

**श्री लेखराज वचानी**: सर, मैं माननीय मंत्री जी को एक instance देता हूँ कि जब माननीय सदस्य श्री केशुभाई जी चार-पांच वर्ष पहले गुजरात में मुख्य मंत्री थे,तो नॉर्थ गुजराज के स्कैंटी एरिया में आर्टिफिशियल रेन हुई,100 परसेंट successful तो नहीं हुए लेकिन जो क्लाउड सीडिंग हुआ,उसमें तीन-चार जिलों में बारिश हुई, लेकिन क्लाउड सीडिंग के बाद द्रुत बारिश हुई। एक उदाहरण और है, कुछ वर्ष पहले जब राजाजी जिंदा थे, चेन्नई में भयंकर दुकाल था। तब एक बड़ा हवन हुआ,लाखों लोग बैठे-यह हिस्ट्री की बात है,और उस हवन के पूरा होने के बाद चेन्नई में बहुत बारिश हुई।यह इतिहास का एक example है कि हवन होने के बाद भी बारिश हो सकती है।

**श्री कपिल सिब्बल**:सभापति महोदय,जो सुझाव ऑनरेबल मैम्बर ने दिया है,उनको सामने रखते हुए हम अपने वैज्ञानिकों को बताएंगे कि आप यह भी शुरु कर दीजिए।

SHRI RAVULA CHANDRA SEKAR REDDY: Sir, the hon. Minister says that indepth study has to be made and that they have to arrive at a consensus to come out with a National Mission. Till such time the State Governments are going ahead with the programme of cloud seeding; more particularly, the State of Andhra Pradesh had spent Rs. 20 Crores last year. This year also they have made elaborate plans and provided money in the Budget. So, in view of the programme of the Government of Andhra Pradesh and other Governments, what is the advice of the Central Government for the current year?

SHRI KAPIL SIBAL: I am glad the hon. Member has raised this issue. I just want to mention some brief facts as to how cloud seeding takes place. What is cloud seeding? Clouds are formed because the water vapour attaches on to particles of dust. When water vapour attaches on to such particles of dust, and more moisture is created, the water vapour becomes very heavy and precipitation takes place. So, what is cloud seeding? Cloud seeding is the addition of Sodium Chloride, that is, salt. If in a cloud cover Pursuant to which water vapour will attach to particles of salt and dust, become heavy and precipitation will take place. We are very happy that the States are continuing with these experiments, we are willing to provide them help. The problem that one cannot say that the rainfall, whether in Chittoor or Cuddapah or Anantpur took place because of cloud seeding, because one has no comparable data in non-seeded areas. It is

only when we will be able to analyse comparable data, which study has not been done and for which a lot of rain gauges in a lot of those areas are required, that we will be able to more forward. And, the States don't have these things. I have told my Department; let us call the States Governments let us have the statistical data, verify it, and once we know that cloud seeding is possible and fruitful, we shall embark on a National Mission programme. Then, there is no problem at all.

**BSNL's demand against MTNL**

*406. SHRI PRAMOD MAHAJAN: Will the Minister of COMMUNICATIONS AND INFORMATION TECHNOLOGY be pleased to state:

(a) whether it is a fact that BSNL has raised a demand of Rs. 1,840 crore against MTNL as part of IUC charges;

(b) if so, the details thereof; and

(c) Government response thereto?

THE MINISTER OF COMMUNICATIONS AND INFORMATION TECHNOLOGY (SHRI DAYANIDHI MARAN): (a) to (c) A statement is laid on the Table of the House.

***Statement***

(a) Yes, Sir.

(b) The details of the demands as reported by Bharat Sanchar Nigam Limited (BSNL) against Mahanagar Telephone Nigam Limited (MTNL) are as follows:—

| Year | Amount Due (Rs. In Crores) |
|---|---|
| 2000-01 | 262.66 |
| 2001-02 | 622.16 |
| 2002-03 | (-)215.51 |
| 2003-04 | 723.88 |
| 2004-05 (Provisionally upto November, 2004) | 338.57 |
| Miscellaneous | 109.56 |
| Total | 1842.32 |
| Less Adjustment towards Bond Redemption | (-)1.88 |
| Net Due from MTNL | 1840.44 |